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GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
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MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
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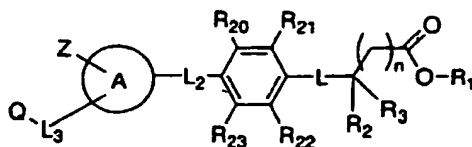
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ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: **N-((((1,3-THIAZOL-2-YL) AMINO) CARBONYL) PHENYL) SULFONYL) PHENYLALANINE DERIVATIVES
AND RELATED COMPOUNDS FOR THE TREATMENT OF DIABETES**



(I)

(57) Abstract: The present
invention relates to compounds and
pharmaceutically acceptable salts
of formula (I), which are useful in
the treatment of metabolic disorders
related to insulin resistance or
hyperglycemia. These compounds

include inhibitors of protein tyrosine phosphatase (PTP-1B) that are useful in the treatment of diabetes and other PTP-1B mediated
diseases, such as cancer, neurodegenerative diseases and the like. The compounds of the invention are also useful in pharmaceutical
compositions and methods of treating the aforementioned conditions.

INTERNATIONAL SEARCH REPORT

International Application No
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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K31/426 A61K31/415 A61K31/4406 C07D277/46 C07D231/12
C07D213/55 C07C311/21 A61P3/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61K C07D C07C A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, BEILSTEIN Data, BIOSIS, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/077347 A1 (ABBOTT LABORATORIES (US)) 20 June 2002 (2002-06-20) page 1, paragraph 2; claims; examples	1, 20, 21
X	WO 02/08188 A (MERCK & CO INC (US)) 31 January 2002 (2002-01-31) page 1, paragraph 1; claims; examples	1, 20, 21
X	WO 02/064094 A (MERCK & CO INC (US)) 22 August 2002 (2002-08-22) page 1, paragraph 1 page 127; example 33 claim 1	1, 20, 21
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
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- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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- *Z* document member of the same patent family

Date of the actual completion of the international search

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Name and mailing address of the ISA

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Cortés, J

INTERNATIONAL SEARCH REPORT

International Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 288 199 A (SHIONOGI & CO (JP)) 5 March 2003 (2003-03-05) page 8, line 46 pages 20-23; examples 60-76; tables 10-15 claims 1-11 -----	1,20,21
X	WO 02/28844 A (SHIONOGI & CO (JP)) 11 April 2002 (2002-04-11) pages 27-49; tables 1-19; compounds claims page 21, line 20 & WPI-abstract, AN: 2002-394341 '42! abstract -----	1,20,21
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X	WO 01/83461 A (SHIONOGI & CO (JP)) 8 November 2001 (2001-11-08) pages 30-47; tables 1-8; compounds claims & WPI-abstract, AN: 2002-066512 '09! abstract -----	1,20,21
X	EP 0 950 656 A (SHIONOGI & CO (JP)) 20 October 1999 (1999-10-20) page 17, line 11, paragraph 69 pages 20-77; examples; tables 1-46 claims 1-23 -----	1,20,21
X	WO 99/32466 A (NOVARTIS (CH)) 1 July 1999 (1999-07-01) page 13, paragraph 2 pages 25-27; examples 11,13,20,23; table 1 claims -----	1,20,21
X	WO 97/38986 A (SEARLE & CO (US)) 23 October 1997 (1997-10-23) page 5, line 12 examples 50-53,62,63,67,72,79,80 claims -----	1,20,21
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International Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 03/048140 A (JAPAN TOBACCO INC (JP)) 12 June 2003 (2003-06-12) page 1, paragraph 1 examples 50,51,53-55,57 claims -----	1,20,21
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P,X	WO 2004/010992 A (MERCK & CO INC (US)) 5 February 2004 (2004-02-05) page 1, paragraph 1 claims; examples -----	1,20,21

INTERNATIONAL SEARCH REPORT

national application No.
PCT/US2004/011650

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claim 21 is directed to a method of treatment of the human body, the search has been carried out and based on the alleged effects of the compounds.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

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International Application No

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